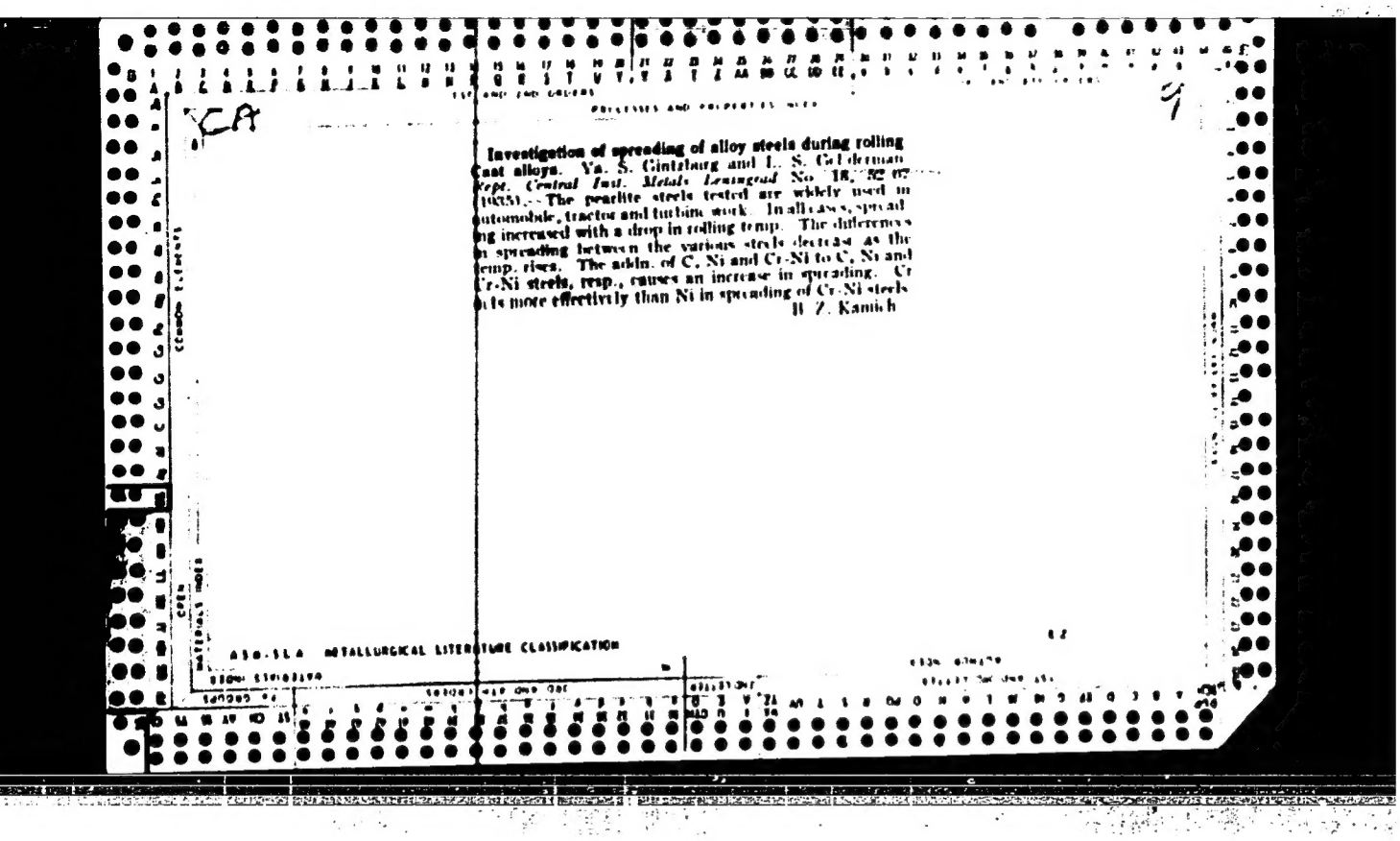
GEL'DERMAN, L..S.

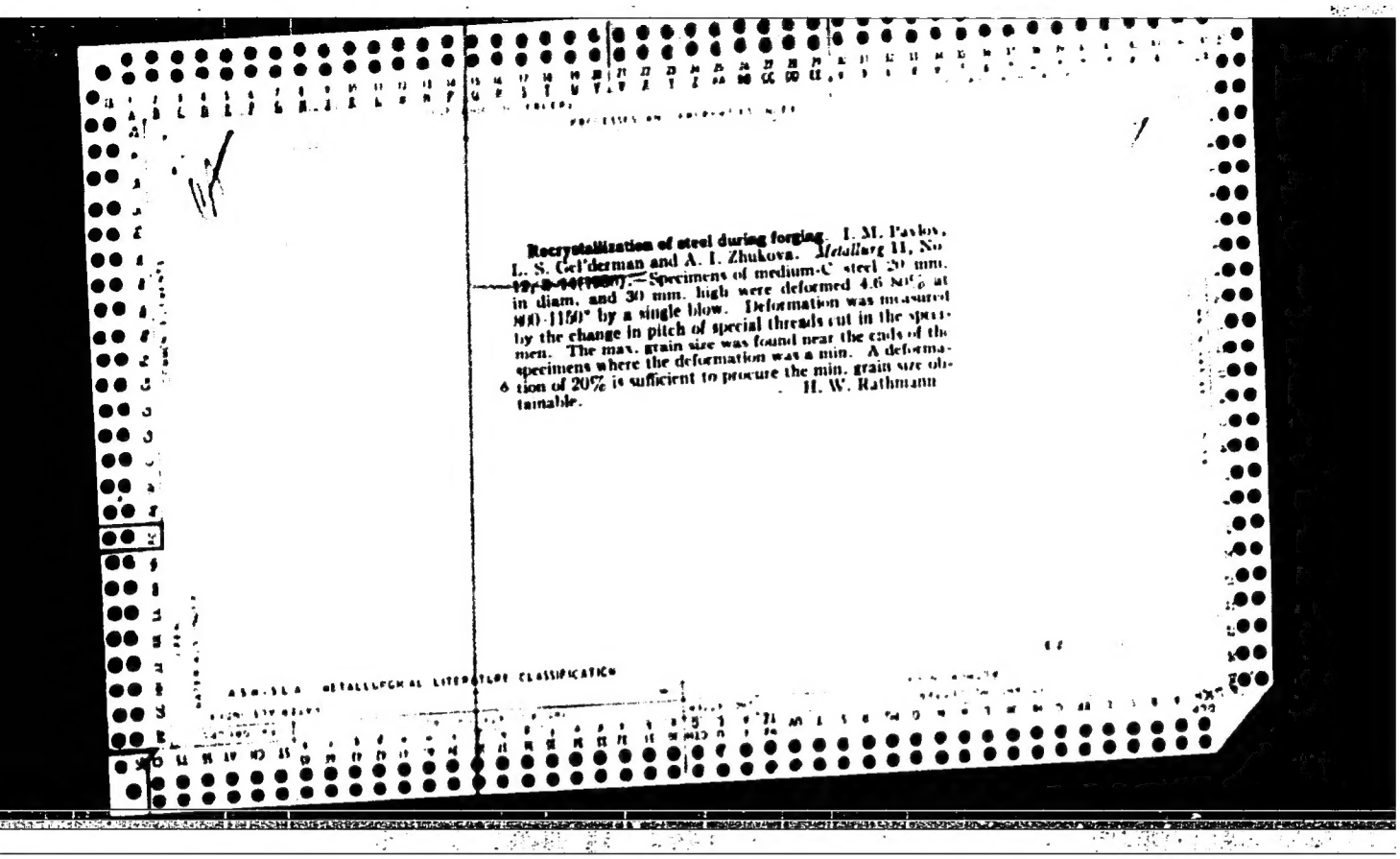
Theory of metal rolling. Leningrad, Glav. red. lit-ry po chernoi metallurgii, 1935. (Mic 53-712)
Collation of the original: 99 p.

Microfilm TJ-6

1. Rolling-mill machinery.



Investigation of spreading of alloy steels during rolling Cast alloys. Ya. S. Ginzburg and L. S. Goldman. *Sept. Central Inst. Metals Leningrad* No. 18, 32-67 (1955).—The pearlite steels tested are widely used in automobile, tractor and turbine work. In all cases, spreading increased with a drop in rolling temp. The differences in spreading between the various steels decrease as the temp. rises. The addn. of C, Ni and Cr-Ni to C, Ni and Cr-Ni steels, resp., causes an increase in spreading. Cr is more effectively than Ni in spreading of Cr-Ni steels.
H. Z. Kanich



Recrystallization of steel during forging. I. M. Pavlov, L. S. Gel'derman and A. I. Zhukova. *Metallurg* 11, No 12, 3-10(1936).—Specimens of medium-C steel 20 mm. in diam. and 30 mm. high were deformed 4.6 [illegible]% at 900-1150° by a single blow. Deformation was measured by the change in pitch of special threads cut in the specimen. The max. grain size was found near the ends of the specimens where the deformation was a min. A deformation of 20% is sufficient to procure the min. grain size obtainable. H. W. Rathmann

GEL'DERMAN, L. S.

18(0) PHASE I BOOK EXPLOITATION SOV/2301

Metallurgiya: sbornik statey, [no.] 1 (Metallurgy: Collection of Articles, No. 1) [Leningrad] Sudpromgiz, 1958. 177 p. 1,500 copies printed.

Resp. Ed.: G. I. Kapyrin, Candidate of Technical Sciences; Ed.: A. V. Popov; Tech. Ed.: O. I. Kotlyakova.

PURPOSE: This book is intended for engineers and technicians at industrial plants, for scientific personnel at research and educational institutions, and for students of advanced metallurgy.

COVERAGE: The articles in this collection deal with the production and hot forming of steel and titanium ingots. Both theoretical and practical aspects are covered. Topics discussed include: crack formation during thermomechanical treatment, dependence of plasticity of low-carbon chrome-nickel steel on the method of steelmaking, vacuum melting of austenitic stainless steel, beneficial effect of hot deformation on steel properties, vectorial properties of sheet metal as related to rolling conditions, crystallization and ingot structure, present status of titanium-ingot production, etc. Numerous references, principally Soviet, accompany the articles.

Card 1/3

Metallurgy; Collection (Cont.)

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

Gel'derman, L.S.

PHASE I BOOK EXPLOITATION SOV/3926

Metallurgiya; sbornik statey, No. 2 (Metallurgy; Collection of Articles, No. 2), Leningrad, Sudpromgiz, 1959. 302 p. 2,300 copies printed.

Resp. Ed.: G.I. Kapyrin, Candidate of Technical Sciences; Eds.: V.I. Gretsov and B.P. Golubeva; Tech. Ed.: V.I. Troshkin.

PURPOSE: This collection of articles is intended for technical personnel at industrial plants and at research and educational institutions. It may also be used by students taking courses in advanced metallurgy.

COVERAGE: The articles present the following material: original data on the production of steel in open-hearth, electric, and vacuum arc furnaces; information on the rolling of steel sheet of variable thickness along the width; results of an investigation of sheet metal made from large ingots; and problems of measuring the temperature of liquid steel. Some theoretical analysis of production processes is included, and practical recommendations are given concerning specific problems. No personalities are mentioned. Most of the articles are accompanied by references.

AVAILABLE: Library of Congress

Card 5/5

VK/rem/mas
7-25-60

GEL'DERMAN, L.S., kand.tekhn.nauk; KUSTOV, A.M., inzh.; PESTOV, V.S., inzh.

Rolling sheets of shaped section. Metallurgiia 2:153-164 '59.
(MIRA 14:3)
(Rolling (Metalwork))

GEL'DERMAN, L.S., kand. tekhn. nauk

Characteristics of sheet macrostructure in relation to the conditions of rolling. Obr. met. davl. no.5:72-82 '59.
(MIRA 13:3)

(Rolling (Metalwork)) (Sheet metal)

GEL'DERMAN, L.S.; KULYAPINA, E.P.

Effect of upsetting on the macrostructure and mechanical properties of forgings. Kuz.-shtam.proizv. 1 no.11:1-5 N '59. (MIRA 13:3)

(Forging)

GELDERMAN, L.S.

PHASE I BOOK EXPLOITATION SOV/3752

Metallovedeniye; sbornik statey, No. 3 (Physical Metallurgy; Collection of Articles, No. 3), Leningrad, Sudpromgiz, 1959. 390 p. 3,200 copies printed.

Ed.: G. I. Kapyrin, Candidate of Technical Sciences; Literary and Tech. Ed.: [illegible]

PURPOSE: This collection of articles is intended for scientific personnel at research and educational institutions and industrial plants and also for advanced students.

COVERAGE: The articles report the results of investigations of 1) the effect of various factors on the susceptibility of constructional and heat-resistant steels and titanium alloys to brittle failure at various temperatures under various conditions of loading (long-time, short-time, cyclic, noncyclic) 2) alloying, structure, and condition of alloys as related to their mechanical properties, and 3) corrosion resistance and evaluation of stainless and heat-resistant steels. The articles are accompanied by numerous Soviet and non-Soviet references. No personalities are mentioned.

AVAILABLE: Library of Congress

VK/[illegible]
7-20-60

Card 6/6

GEL'DERMAN, L.S. kand.tekhn.nauk; KULYAPINA, E.P., inzh.

Structure and properties of forgings in connection with the conditions in which they were forged. Metallovedenie 3:349-357 '59. (MIRA 14:3)
(Forging)

GOLDENKO, A.Ye. [Holdenko, A.IE.]; GEL'DERMAN, M.A. [Hel'derman, M.A.]

Attachment for the machining of the worms of caramel wrapping machines. Kharch.prom. no.4:73-74 O-D '63. (MIRA 17:1)

GERSHERMAN, M.A.; Gol'dshteyn, A. Ye.

High-speed [illegible] (MIRA 11:7)

GEL'PERMAN, M.A.; GORBENKO, A.Ye.

High-speed draw-in chucks. Ratsionalizatsiia 14 no.10:22 '64.

POLOVCHENKO, I.G., kand.tekhn.nauk; GEL'DFAND, V.I.

Automatic correction of the deviations of mixture batch weights in charging open-hearth furnaces. Avtom.i prib. no.1:18-21 Ja-Mr '62. (MIRA 15:3)

1. Dneprovskiy metallurgicheskiy zavod im. Dzerzhinskogo (for Polovchenko). 2. Ukrgipromez (for Gel'dfand).
(Open-hearth furnaces) (Automatic control)

GEL'DFEL'D, B.S.; TSKHADADZE, G.O.

Collectors with plastic hulls for use in electric machines. Elek. i tepl. tiaga 7 no.6:5-6 Je '63. (MIRA 16:9)

1. Nachal'nik konstruktorskogo byuro Tbilisskogo elektrovozostroitel'nogo zavoda im. V.I.Lenina (for Gel'dfel'd). 2. Nachal'nik tekhnologicheskogo byuro Tbilisskogo elektrovozostroitel'nogo zavoda im. V.I.Lenina (for TSkhadadze).
(Electric machinery)

GEL'DIYEV, O.

GEL'DIYEV, O.: - "Material on the study of Botkins's disease in the city of Ashkhabad". Ashkhabad, 1955. Turkmen Medical Inst imeni I. V. Stalin. (Dissertation for the Degree of Candidate of Medical Sciences)

SO: Knizhnaya Letopis', No. 40, 1 Oct 55

E

Country : USSR
Category: Virology. Viruses of Man and Animals
Rickettsias

Abs Jour: Ref Zhur-Biol., No 23, 1958, No 103536

Author : Gel'dner, L. B.
Inst : Molotov Medical Institute
Title : Methods of Studying the Effect of Environmental Factors on the Typhus Virus

Orig Pub: Tr. Molotovsk. med. in-ta, 1957, No 26, 202-204

Abstract: The experiments were performed by the method of epidermal membrances. Only the conclusions are presented in the article.

Card : 1/1

GEL'DNER, L. B.

F

Abs Jour : Ref Zhur-Biol., No 13, 1958, 57452

Author : Gel'dner L. B.
Inst : Molotov Medical Institute
Title : Experiment of Vegetative Hybridization of Proteus vulgaris on a Nutritive Medium Containing Proteins of Rickettsia Prowazekii

Orig Pub : Tr. Molotovsk. med. in-ta., 1957, vyp. 26, 205-207

Abstract : Two strains of proteus valgaris and one strain of coli bacillus were passed on a "rickettsia medium" (a mixture of typhus infected lice ground in a mortar and dissolved in physiological solution). After 20 passages were carried out at three 24 hour intervals both strains of proteus began to agglutinate with the typhus serum in

Card 1/2

GR[illegible], I.B., Botanist (Perm')

Role of Perm scientists in the inception and development of medical microbiology in the Urals. Trudy Perm. gos. med. in-ta. 43:49-53 '63. (MIR 17:6)

GELDNER, M.

Tularemia. Polski tygod. lek. 5:7, 13 Feb. 50. p. 266-9; contd.

CLML 19, 5, Nov., 1950

GELDNER, M.

Tularemia; symptoms and clinical course. Polski tygod. lek. 5:8, 20 Feb. 50. p. 305-7; contd.

CLML 19, 5, Nov., 1950

GELDNER, M.

Tularemia. Polski tygod. lek. 5:9, 27 Feb. 50. p. 345-8

CLML 19, 5, Nov., 1950

[illegible] Y.

([illegible])

[illegible], A. [illegible] The surgical treatment of [illegible] of the [illegible], combined with streptomycin therapy [illegible], [illegible], 1952, [illegible] Tables 2

Surgical treatment of tuberculomas combined with [illegible] streptomycin [illegible] about [illegible]. Of [illegible] cerebral cases (11 supra-, 1[illegible] infratentorial) [illegible] before and after the streptomycin era, [illegible] cases of infratentorial [illegible] in detail. The dosage of streptomycin is 0, [illegible] 1 [illegible]/day intrathecally [illegible] day intramuscularly during [illegible] weeks. The [illegible] course [illegible] intervals. [illegible] lumbar puncture in patients with [illegible] of the internal or [illegible] of great value for the indication of early intrathecal streptomycin therapy. [illegible] - Wroclaw (VIII, 1[illegible])

SO: [illegible], VOL. 7. NO. [illegible], SECTION VIII August 195[illegible]

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000514620005-8"

GELDNER, Mieczyslaw

Proper approach to balneological therapy of sciatica in view of experience with surgical treatment. Neurologia etc. polska 5 no.1: 69-76 Jan-Feb 55.

1. Z kliniki neurol. A.M. w Warszawie; kier. prof. dr. J.Chorobski.
(SCIATICA, therapy
balneother., relation to surg. treatment)
(BALNEOLOGY, in various diseases
sciatica, relation to surg. treatment)

BODRYY, M.; GUSEYNOV, M.; AGRETKIN, S.N., red.; ATALYKHANOV, A., red.; BIRA, Ya.I., red.; GEL'DYYEV, A., red.; GOLOVKIN, A.V., red ; MAMEDKULIYEV, A., red.; KATALOV, Ch., red.; KHAIMURADOV, B., red.

Sovet Turkmenistany. Soviet Turkmenistan. Ashkhabad, Turkmenskoe izd-vo, 1964. 103 p. [In Turkmen, Russian, English, and Arabic] (MIRA 18:4)

GEL'DYYEV, E.

Tectonics of the Chikishlyar region. Izv. AN Turk. SSR.Ser. fiz.-tekh., khim. i geol. nauk no.4:67-76 '63. (MIRA 17:2)

1. Institut geologii AN Turkmenskoy SSR.

KHADZHINUROV, N.; GEL'DYYEV, E.

Geological structure of the Kamyshldzha deposit. Izv. AN Turk. SSR. Ser. fiz.-tekh., khim. i geol. nauk no.4:121-123 '63. (MIRA 17:2)

1. Turkmenskiy filial Vsesoyuznogo neftegazovogo nauchno-issledovatel'skogo instituta.

GEL'DYYEV, E.

Reservoir properties of the arenaceous-silt rocks of red beds in the Okarem deposit. Dokl. AN Azerb. SSR 19 no.8:49-53 '63. (MIRA 17:11)

1. Institut geologii AN AzSSR. Predstavleno akademikom AN AzSSR Sh. F. Mekhtiyevym.

GEL'DYYEV, K.

USSR / Farm Animals, Cattle (Small) Q-3

Abs Jour: Ref Zhur-Biol., No 2, 1958, 7175

Author : K. Gel'dyyev
Inst : Not given.
Title : Saradzhinskiy Breed - Planned Grading Up of Local Kurdyuk Sheep.

Orig Pub: S. kh. Turkmenistana. 1957, No 3, 38-42

Abstract: No abstract.

Card 1/1

GEL'DYYE'7,Kh.

Some data from the experience of polyclinical examination of workers at the S.M.Kirov Synthetic Rubber Plant. Trudy Vor. med. inst. 47:88-89'62 (MIRA 16:12)

1. Kafedra organizatsii zdravookhraneniya Voronezhskogo meditsinskogo instituta.

GEL'DYYEV, Kh.

Incidence of disease with a temporary loss of working capacity in chronic intoxication with styrene in industry. Zdrav. Turk. 8 no.1:36-38 Ja '64. (MIRA 17:5)

1. Iz kafedry organizatsii zdravookhraneniya Voronezhskogo meditsinskogo instituta (zaveduyushchiy - prof. T.Ya. Tkachev).

GEL'DYYEVA, A.G.

Conditioned reflex changes in the phagocytic activity of leucocytes of the peripheral blood and the effect of cortical stereotype on that process. Izv.AN Turk.SSR no.2:65-69 '55. (MLRA 9:5)

1. Turkmenskiy gosudarstvennyy meditsinskiy institut imeni I.V. Stalina.

(LEUCOCYTES) (BRAIN)

GEL'DYYEVA, A.G. (Ashkhabad)

Cortical regulation of phagocytosis. Pat. fiziol. i eksp. terap. 6 no.6:40-44 N-D'62 (MIRA 17:3)

1. Iz kafedry patofiziologii (zav. - prof. V.A.Yusin) Turkmenskogo meditsinskogo instituta.

GEL'DZAND, L.L. (Leningrad)

Abcesses and phlegmona of the head and neck in children. Fel'd. i akush. 26 no.9:16-19 S '61. (MIRA 14:10)
(NECK--ABCESS) (PHLEGMON)

GELEBOVICH, T A

USSR/Geochemistry
Biochemistry
Boron

Aug 1946

"Boron in the Sea," T A Gelebovich

"Trudy Biogeokhimicheskoy Lab" No 8

Analytic methods of determining small quantities of boron. History of the presence of boron in sea water; history of the presence of boron in sea organisms. Experimental data (boron in water, large salt lakes, marine plants, marine animals). Exchange between the sea and dry land; conclusions. Tables and bibliography.

3T35

GELEI, Anna

"International comparison of the proportions of investments" by Luc de Voghel. Reviewed by Anna Gelei. Stat szemle 41 no.2:214-216 F '63.

...l, J.

...l, J. Fauna and flora of some temporary stagnant pools in a meadow of the Pilis Mountains in Upper Hungary. I. Stagnant pools. In German. p. 2.7.

Vol. 1, No. 3/4, 1954.
ACTA BIOLOGICA
SCIENCE
Budapest, Hungary

So: East European Accession, Vol. 5, No. 5, May 1956

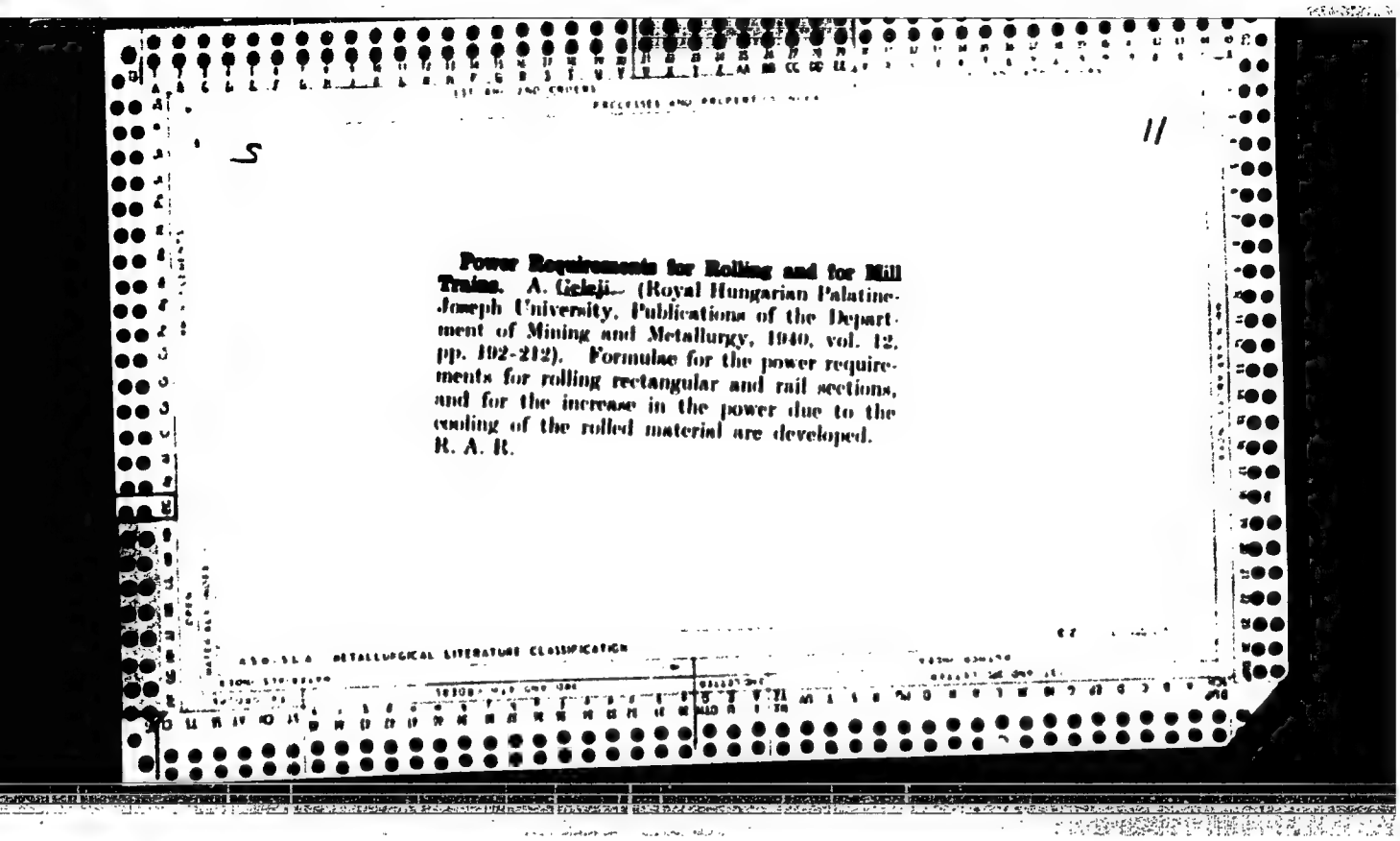
GELEI, J.

GELEI, J.

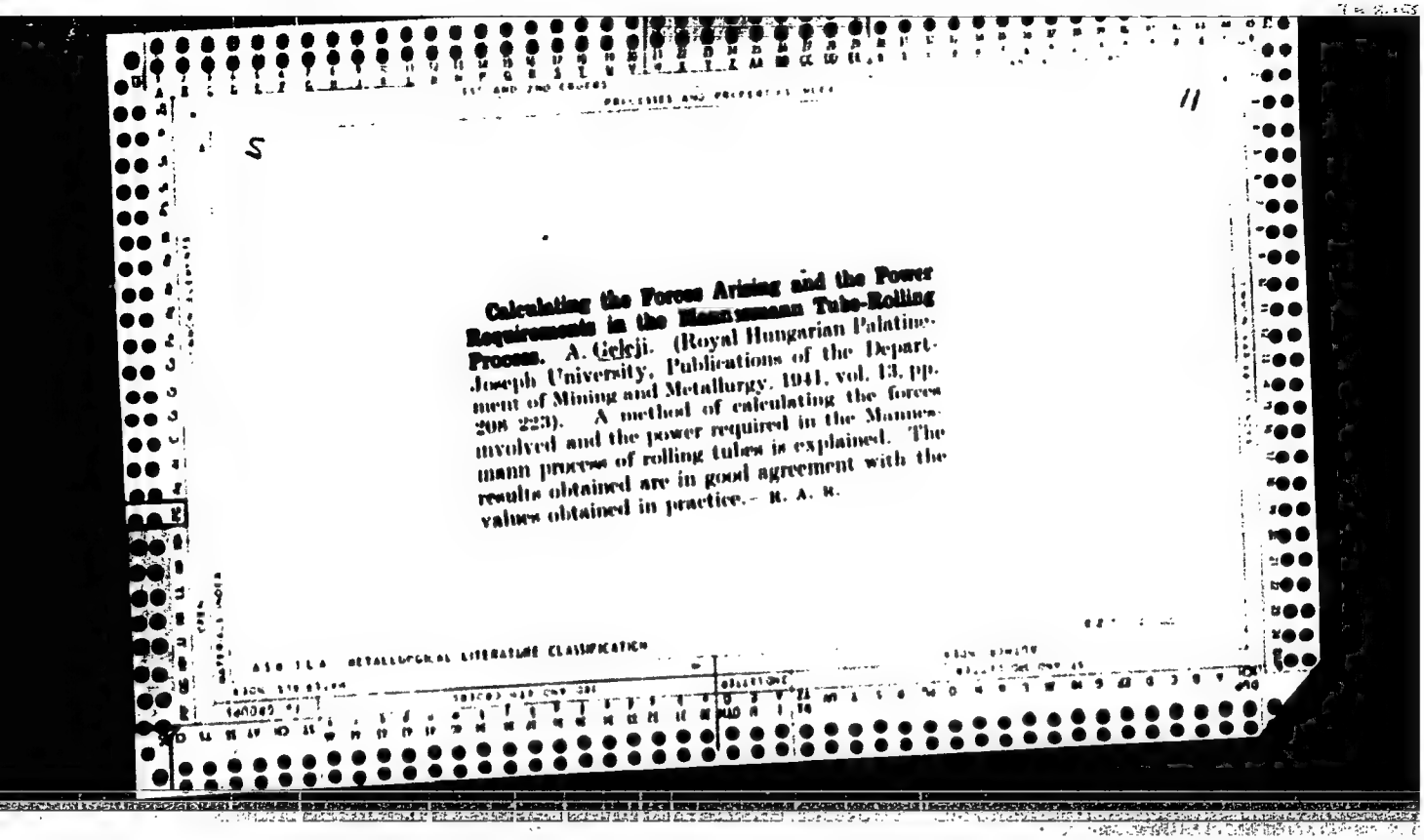
GELEI, J. Fauna and flora of some temporary stagnant pools in a meadow of the Borzsony Mountains in Upper Hungary. Acta biologica. Ser. Turbellaria. In German. p. 259.

Vol. 5, No. 3/4, 1954.
ACTA BIOLOGICA.
SCIENCE
Budapest, Hungary

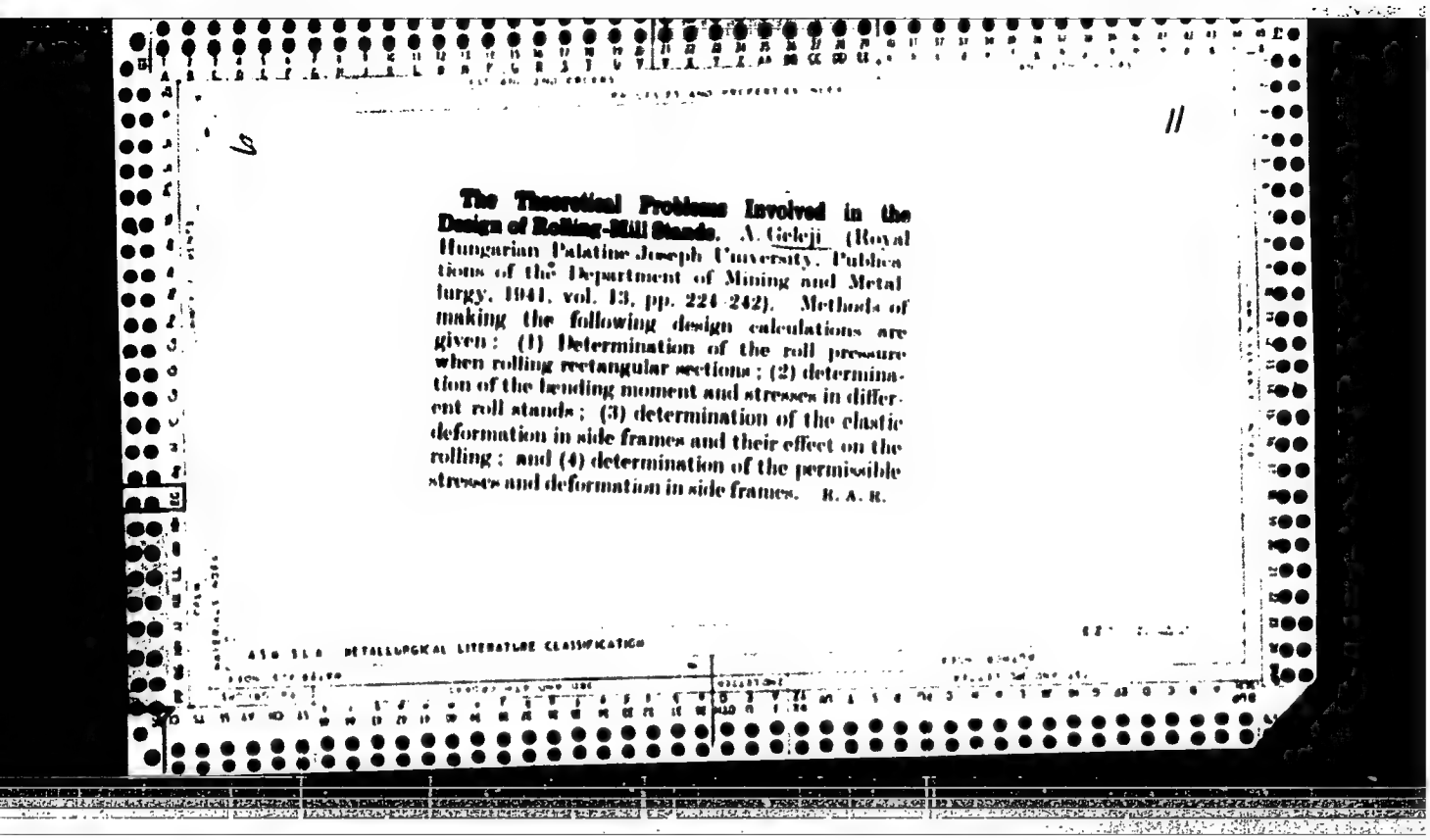
So: East European Accession, Vol. 5, No. 5, May 1956



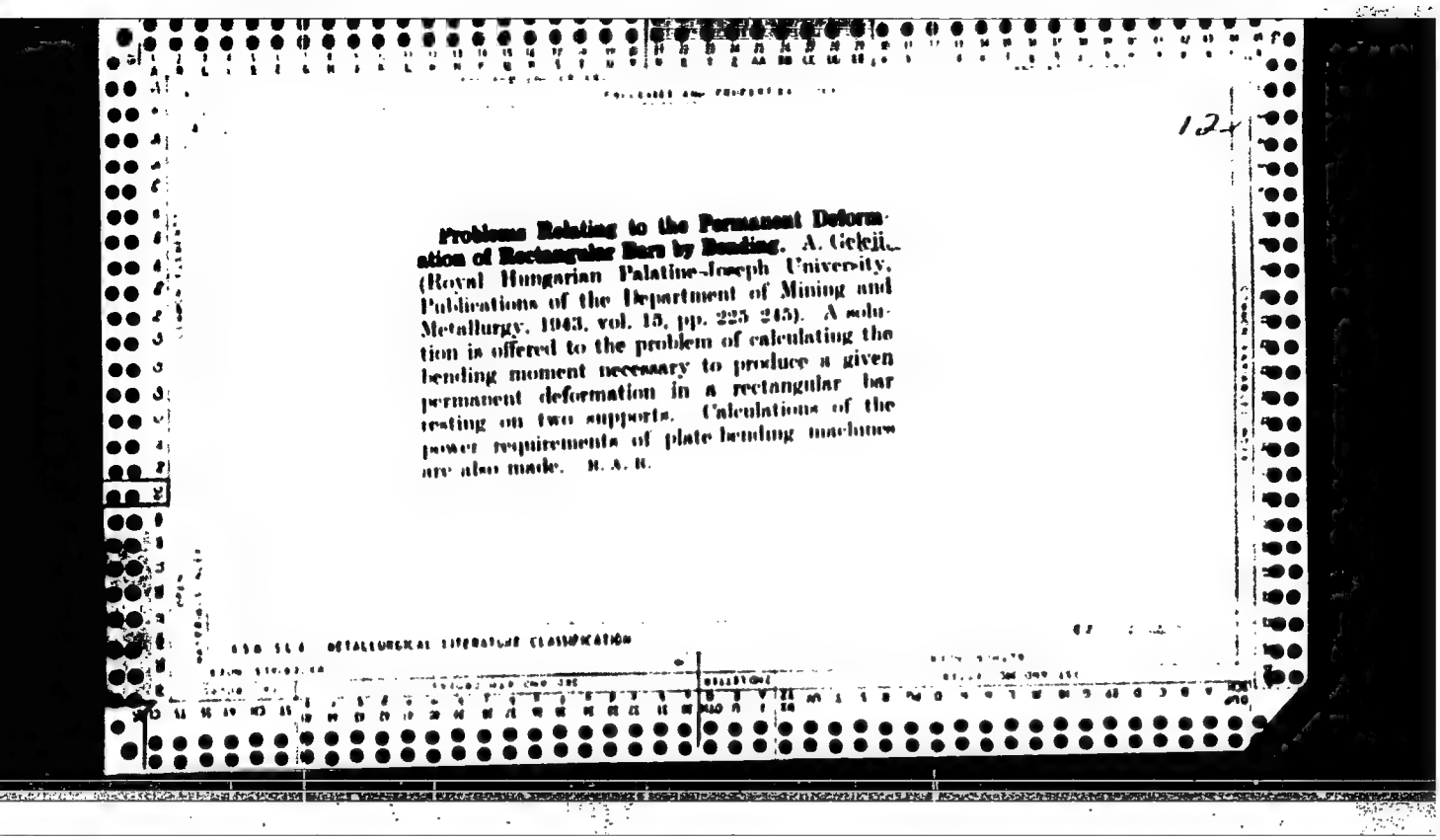
Power Requirements for Rolling and for Mill Trains. A. Ickeji. (Royal Hungarian Palatine-Joseph University. Publications of the Department of Mining and Metallurgy, 1940, vol. 12, pp. 192-212). Formulæ for the power requirements for rolling rectangular and rail sections, and for the increase in the power due to the cooling of the rolled material are developed. R. A. R.



Calculating the Forces Arising and the Power Requirements in the Mannesmann Tube-Rolling Process. A. Gelejí. (Royal Hungarian Palatine-Joseph University, Publications of the Department of Mining and Metallurgy, 1941, vol. 13, pp. 208 223). A method of calculating the forces involved and the power required in the Mannesmann process of rolling tubes is explained. The results obtained are in good agreement with the values obtained in practice.– R. A. R.



The Theoretical Problems Involved in the Design of Rolling-Mill Stands. A. Geleji (Royal Hungarian Palatine Joseph University. Publications of the Department of Mining and Metallurgy, 1941, vol. 13, pp. 224–242). Methods of making the following design calculations are given: (1) Determination of the roll pressure when rolling rectangular sections; (2) determination of the bending moment and stresses in different roll stands; (3) determination of the elastic deformation in side frames and their effect on the rolling; and (4) determination of the permissible stresses and deformation in side frames. R. A. R.



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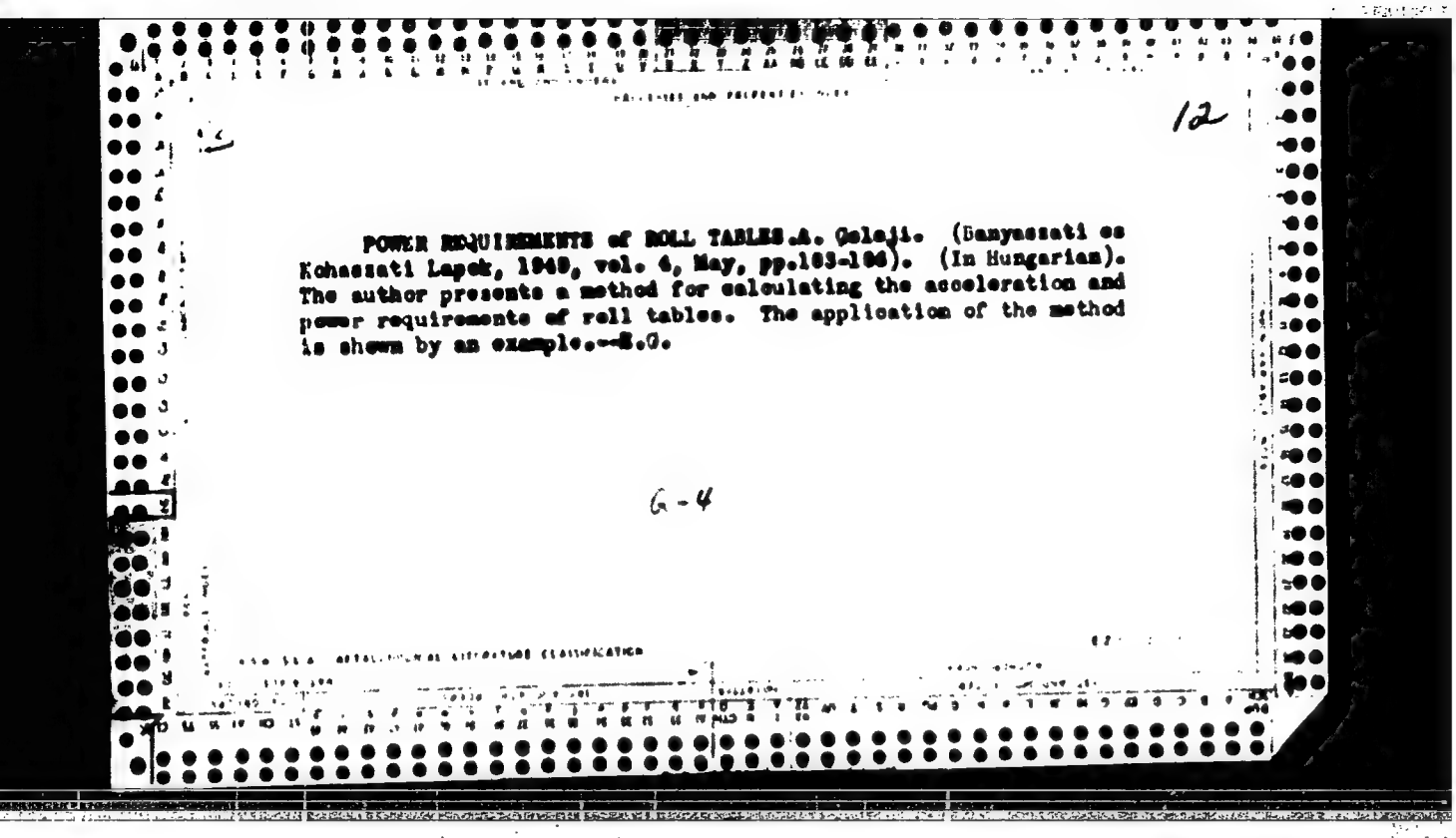
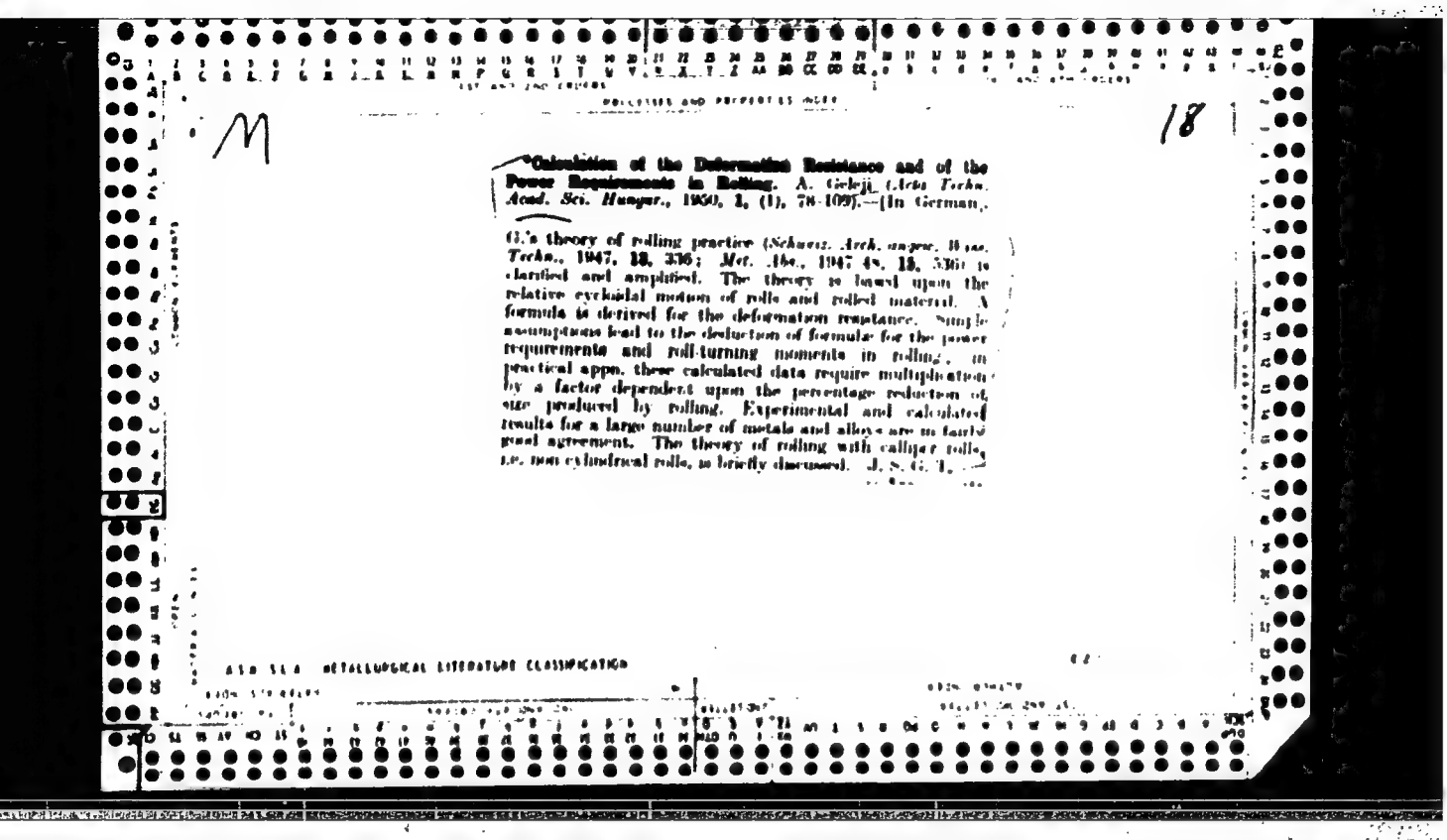
Problems Relating to the Permanent Deformation of Rectangular Bars by Bending. A. Cekji. (Royal Hungarian Palatine-Joseph University, Publications of the Department of Mining and Metallurgy. 1943. vol. 15, pp. 225-245). A solution is offered to the problem of calculating the bending moment necessary to produce a given permanent deformation in a rectangular bar resting on two supports. Calculations of the power requirements of plate bending machines are also made. B. A. R.



12

POWER REQUIREMENTS of ROLL TABLES.A. Goleji. (Banyaszati es Kohaszati Lapok, 1949, vol. 4, May, pp.183-186). (In Hungarian). The author presents a method for calculating the acceleration and power requirements of roll tables. The application of the method is shown by an example.--E.O.

G-4



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18

Calculation of the Deformation Resistance and of the Power Requirements in Rolling. A. Geleji. (*Acta Techn. Acad. Sci. Hungar.*, 1950, **1**, (1), 78–109).—(In German.)

G.'s theory of rolling practice (*Schweiz. Arch. angew. Wiss. Techn.*, 1947, **13**, 336; *Met. Abs.*, 1947 **15**, 336) is clarified and amplified. The theory is based upon the relative cycloidal motion of rolls and rolled material. A formula is derived for the deformation resistance. Simple assumptions lead to the deduction of formulæ for the power requirements and roll-turning moments in rolling. In practical appns. these calculated data require multiplication by a factor dependent upon the percentage reduction of size produced by rolling. Experimental and calculated results for a large number of metals and alloys are in fairly good agreement. The theory of rolling with calliper rolls, i.e. non-cylindrical rolls, is briefly discussed. J. S. G. I.

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

5

Forging, Stamping, Drawing, & Rolling

Duration and Efficiency of the Impact in Forging. A. Gelejl. (*Acta Technica Academiae Scientiarum Hungaricae*, 1951, 2, 3, 299-317). [In German]. The kinetic energy of the hammer in forging is transformed on impact into useful work of plastic deformation and into losses associated with the elastic deformation and possibly vibrations of the base supporting the anvil. Three cases are analysed: (1) A plastic mass is deformed by the simultaneous impact of two freely moving bodies which hit it axially from opposite directions; (2) the case in which the anvil is treated as a static elastic column of infinite length; and (3) the case in which the anvil is replaced by a flat-surfaced semi-infinite elastic medium. The duration of the impact is determined in each instance, and the energy dissipated in the base is calculated. From this the efficiency of energy transfer to the forged object is derived. — P. P.

GELEJI, A.

V. 2, No 11, Nov. 1953

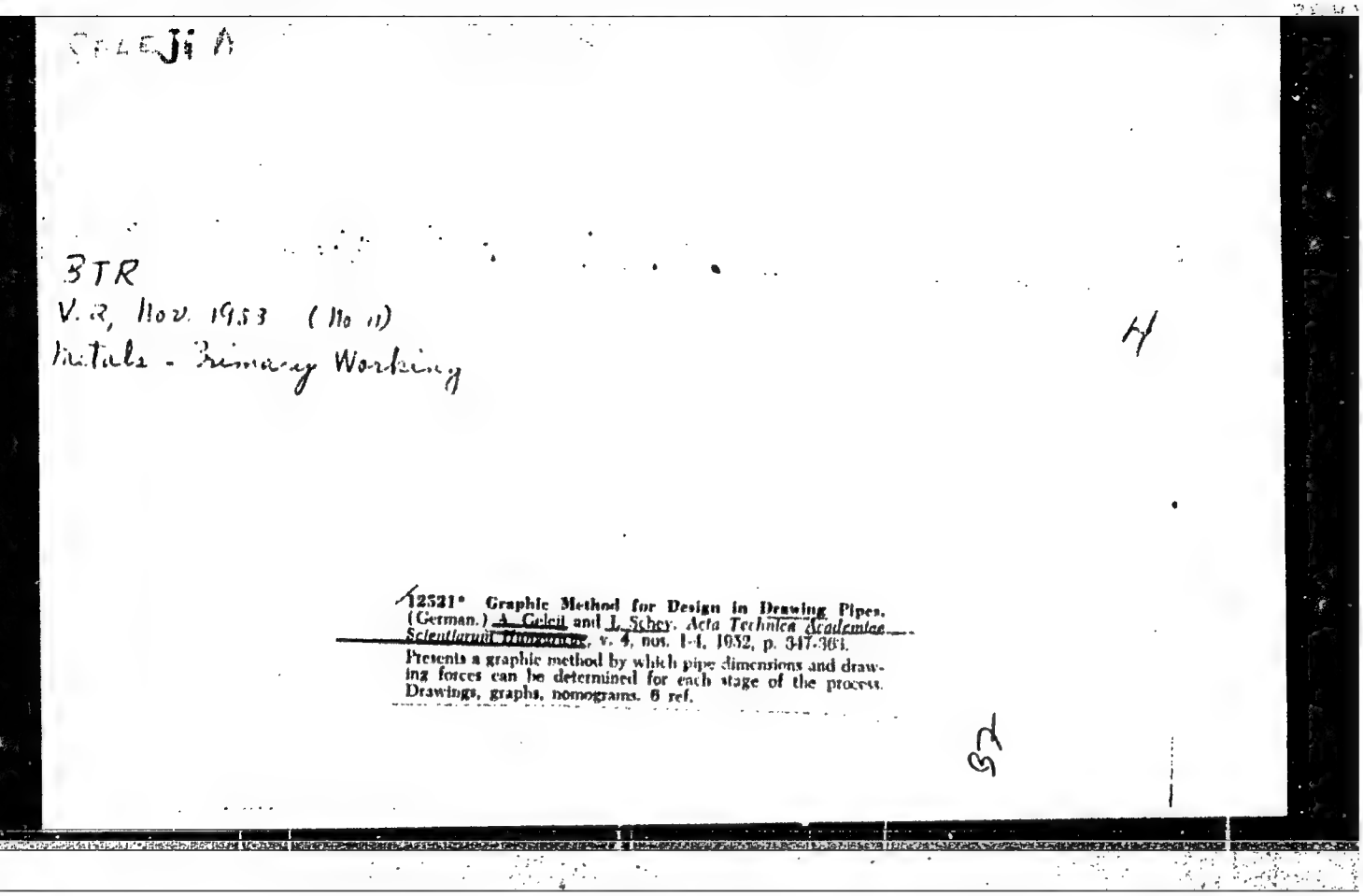
Metals - Smelting, Reduction, & Refining

12482* Copper Refining in a Rotary Furnaces. (German.) A. Geleji and J. Sebey. *Acta Technica Academiae Scientiarum Hungaricae*, v. 3, nos. 3-4, 1952, p. 393-425.

Compares advantages of short and long furnaces. Photographs, micrographs, graphs, tables, diagrams. 15 ref.

...ljI, A.
...IK
... 2, No. 11, Nov 1953
Metals – Secondary Working

12331* Extrusion and Punching Method. (German.) A. Geleji. *Acta Technical Academiae Scientiarum Hungariae*, v. [illegible] 1-4, 1952, p. 273-292.
Presents theoretical analysis of structures and pressures. Micrographs, graphs, drawings. 13 ref.



SPLEJI A

BTR
V. R, Nov. 1953 (No 11)
Metals - Primary Working

4

12521* Graphic Method for Design in Drawing Pipes. (German.) A. Geleji and L. Schey. *Acta Technica Academiae Scientiarum Hungaricae*, v. 4, nos. 1-4, 1952, p. 347-361.

Presents a graphic method by which pipe dimensions and drawing forces can be determined for each stage of the process. Drawings, graphs, nomograms. 6 ref.

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GELEJI, A.

"Effects of the Size of Rolls in the Cold Rolling of Metal Sheets and Strips" p. 217, ACTA TECHNILA ACADEMIA SCIENTIARUM HUNGARICAE, Vol. 7, No. 1/2, 1953, Budapest, Hungary).

SO: Monthly List of East European Accessions, L. C., Vol.2, No.11, Nov. 195? Uncl.

Gelej, A.

3000. Gelej, A., Calculation of efforts and power demand in the Ehrhardt process of making seamless pipe (in German), *Acta Techn Hung Budapest* 7, 3/4, 177–206, 1953.

The basic principle involved is one of indirect extrusion of a square billet of such size that it will slip into the round extrusion cylinder and will completely fill the space in the cylinder when the extrusion mandrel is forced into it. The force initially required to push the mandrel into the billet is calculated on the basis that the mandrel pressure is equal to the flow strength of the material. Subsequent reduction is obtained by rolling with the mandrel in place, or by drawing, in which the mandrel forces the extruded bloom through a series of dies.

The forces involved in these subsequent operations are calculated as a series of steps based on a consideration of three dimensional states of stress in the material as it passes through the rolls or dies. The conditions of flow are based on a constant flow stress k_f.

The total work calculated includes the work of deformation, the friction energy loss in the die, and the friction energy loss in slippage on the mandrel. R. G. Sturm, USA

GELEJI, A.

"Power Demand of Rolling in Shape Passes." p. 203, Budapest, Vol. 3, No. 9, September 1954, Lib. of Congress

GELEJI, A

✓ *Calculation of the Power Requirements for Rolling with Grooved Rolls. A. Geleji (*Acta Techn. Acad. Sci. Hungar.*, 1954, 9, (1/2), 205–212) [in German]. In continuation of previous work (*ibid.*, 1950, 1, 78; *M.A.*, 19, 155) G. develops a theory which enables the power requirements for rolling metals with grooved rolls to be deduced. The power requirement comprises two components: (a) that necessary for shaping the rolled material and (b) that necessary to overcome friction set up in the grooves. The former depends on the reduction, the resistance to shaping, and the speed of rolling; the latter depends on: (1) the relative velocity of gliding of the rolls on the material being rolled, (2) the coeff. of friction and the rolling pressure, and (3) the mean resistance to shaping. The average coeff. of friction in the groove is less than the friction coeff. in blooming or plate-rolling.

—J. S. G. T.

(RELEASED)

HUNG

"Calculation of the Broadening and Forward-Slip Occurring in Rolling. A. Geleji (*Acta Techn. Acad. Sci. Hungar.*, 1954, 9, (3/4), 443-474). (In German). A rational theory of the broadening and forward slip occurring in the rolling of rectangular strips, between cylindrical rolls, is developed and satisfactory agreement is found between theoretical and experimental results due to Siebel and Fangmeier (*Mitt. Kais. Inst. Eisenforsch.*, 1930, 12, 225) and to G. [illegible] 700° [illegible] C. - J. S. G. T.

GELEJI, A.

"Jolist Commemoration of the Work of Dr. Jozsef Jolly-Kossuth Prize Winner, Professor at the Technical University in Budapest, Member of the Hungarian Academy of Sciences", p. 459. (ACTA [illegible], Vol. 9, No. 3/4, 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955, Uncl.

GELEJI, A

Distr: 4E2c/4E2b(w)

Book—454. Geleji, A., Computation of forces and power in plastic forming metals [Die Berechnung der Kräfte und des Arbeitsbedarfs bei der Formgebung im bildsamen Zustande der Metalle], 2nd revised and enlarged ed., Budapest, Akademiai Kiado, 1953, 415 pp.

Book is a revision of author's 1948 edition of the same title. The essential chapters are on various phases of rolling as well as drawing operations for rods, wires, and tubes, combinations of cold-drawing and cold-rolling, extrusions and the bending and deep-drawing of sheet metal. The comprehensive treatment of experimental results and design information is based on the 208 references listed in the text. Chapter I is a brief review of total strain theory which is used to establish the design equations found throughout the book. Although author states that the book is primarily for use by machine and tool designers, it is regrettable that he did not include the slipline solutions or incremental strain solutions of the many papers published during the past years on experimental and theoretical work in the field of plasticity.

J. Frisch, USA

GELEJI, A

HUNG.

9463* Power Requirement and Forming in Extrusion and Die-Forging. Kraftbedarf und Fliessvorgänge beim Strangpressen und beim Pressen im Gesenk. (German.) A. Gelejl. *Acta Technica Academiae Scientiarum Hungaricae*, v. 10, no. 1-2, 1955, p. 187-220.

Verification of the theory of extrusion, for nerly established by the author; calculation of forces developed in die-forging. Diagrams, graphs, photographs. 14 ref.

GELEJI, A.

78. Determination of the forces required for the plastic deformation of aluminium and aluminium alloys. (in Hungarian) I. *Kohászati Lapok*. Vol. 10 (88), 1955, No. 12, pp. 564—570, 20 figs., 1 tab.

The results obtained by computational methods established on the basis of the author's theory of plasticity have been subjected to comparison with his own tests and those conducted by Baucke, Lucas, Sachs, Bernhoeft and Pearson. It was verified that the acting forces and deforming work could be established by calculations in all branches of plastic deforming processes occurring in practice for both aluminium and aluminium alloys as well. These calculations can be carried out with very good practical exactitude whenever sufficiently accurate data on the physical properties of the material subject to plastic deformation are available for substitution in the formulae. These properties are resistance to deformation, the friction factor and the specific work required for producing internal displacements of material referred to unit volume.

GELEJI, A.

Computation of Stresses arising in Foundations of Power Driven Forge Hammers in Operation. A. Geleji and G. Dévényi. (*Acta Techn.*, 1955, 11, (1-2), [illegible] (In German). The paper is a further development of "Duration and Efficiency of the Thrust Process in Forging" published by the author (*Acta Techn.*, 1951, 1, 299-318, and deals with a new method of evaluating the stresses as a function of the design and mode of performance of the power hammers and their bases.—P. V.

Forces Developed and the Power Demand for the Cold Pilger-Rolling of Tubes. A. Geleji (*Acta Tech. Acad. Sci. Hungar.*, 1953, 11, (3/4), 301-318). [In German]. Math. and graphical methods of calculating, with sufficient accuracy for practical purposes, the forces developed and the power requirements for the cold pilger-rolling of tubes (see Zacco, *Tekn. Tidskr., Bergsvetenskap.*, 1937, 67, 89) are developed. A description of the process is given. 9 ref.—J. S. G. T.

GELEJI, A. (Prof. Dr.) Hungary

VIII. Berg- und Hüttenmännischer Tag in Freiberg

Die Berechnung des mittleren Verformungswiderstandes bzw. Walzdruckes beim Warm- und Kaltwalzen von quadratischen Stangen und blechförmigen Körpern.

SO: Neue Hütte, September 1956, Unclassified.

GELEji, A

53. **A metal foil rolling mill drive with cascade-connected asynchronous motors** (In German) V. Uray, A. Geleji. *Acta Technica Academiae Scientiarum Hungaricae*. Vol. 14, 1956, No. 3–4, pp. 463–476. 5 figs.

The paper treats the electrical part of a metal foil rolling mill with cascade-connected asynchronous motors driving the rolls and the coiling unit. This new type of strip mill drive permits the elimination of costly and complicated automatic mechanisms retaining nevertheless all their advantages.

GELEJI, A. and others.

Measurement and calculationof the rolling pressure and of the power demand on the pilger tube-rolling mill. In German. p. 205.
(Acta Technica. Vol. 15, no. 1/2, 1956, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 6, July 1957, Uncl.

GELEJI, A.

ACTA [illegible]
ACADEMIAE SCIENTIARUM HUNGARICAE
Vol. XVII, [illegible], 1957

3

COMPUTATION OF THE MEAN DEFORMATION RESISTANCE AND OF THE ROLLING PRESSURE ARISING AT COLD AND HOT ROLLING OF SQUARE RODS AND SHEETS

Prof. A. GELEJI
Member of the Hungarian Academy of Sciences

Mf & Steel

SUMMARY

The paper shows a method for computing the deformation resistance at hot and cold rolling. For computing the deformation resistance serves the formula

$$k_m = k_f \cdot \left(1 + G \cdot \mu \cdot \frac{l_d}{h} \cdot \frac{1}{\mu}\right), \qquad (1)$$

where the coefficient G depends at cold rolling as well as at hot rolling from the ratio $\left(\frac{l_d}{h}\right)$.

The function $G = f\left(\frac{l_d}{h}\right)$ has been determined empirically (Fig. 2).

At cold rolling the compressed gripping arc is increased by the flattening of the rolls. This flattening causes an increase of the rolling pressure and the deformation resistance. For computing the increased gripping arc serve formulae (11) and (12).

The practical range of usefulness and the precision of the method can be seen from the Tables.

These Tables permit also to draw valuable conclusions on the size and the variation of the coefficient of friction depending on rolling pressure and rolling speed.

Distrs 4E2c/4E2d(w)

180. New theory of rolling. (In German) A. Gelej. *Acta Technica Academiae Scientiarum Hungaricae*. Vol. 19, 1957, No. 1—2, pp 199—243, 32 figs.

The most important theories of rolling (Kármán, Orowan and Mican) are dealt with briefly and critically. It is pointed out that these theories do not take into consideration the circumstances which produce the phenomena accompanying rolling (enlargement and forward slip) the key to the proper interpretation and determination of the forces arising in the rolling gap. The new theory explains the causes of enlargement and forward slip and at the same time points out the forces that must be considered in the determination of the resistance to deformation. The theory is briefly summarized in the following: At any point of the compressing surface of the rolls the resistance to forming in rolling consists in the total yield strength of the rolled material and in the compressive stress acting on the vertical cross section of the piece at the point in question. This compressive stress, acting in the direction of the axis of the rolled piece, consists of two components of different origin. One component derives from the fact that the frictional stresses arising in the rolling gap between the rolls and the piece produce, in the direction of the longitudinal axis of the piece, two compressive forces of opposite sign balancing each other in the neutral cross section. The other component of the compressive stress acting in the direction of the axis of the piece stems from the fact that when the column of material is compressed between the cross section of the entry section and the neutral section in the rolling gap, the side of this column of the material that coincides with the neutral cross section exerts pressure on the part of the piece behind the neutral cross section, extruding it from between the rolls through the cross section of the exit at a velocity higher than the peripheral velocity of the rolls, that is, with a forward slip. All three compressive stresses attain their maxima in the neutral cross section. The surplus resistance to forming required for deforming the vertical cross sections in the rolling gap (for producing internal displacements of material) should be added to the resistance of deformation determined from the yield strength and the compressive forces acting in the direction of the longitudinal axis of the piece. The theory is valid for both hot and cold rolling.

HH

2-MJC/RJN

1- 2

GELEJI, A.

Report on the operations of the Section of Technical Sciences of the Hungarian Academy of Sciences to the 1958 General Assembly of the Hungarian Academy of Sciences; also, remarks by A. Tarczy-Hornovh and others. p.411.

Magyar Tudomanyos Akademia. Muszaki Tudomanyok Osztalya. KOZLEMENYEI. Budapest, Hungary. Vol. 23, no. 3/4, 1959.

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 9, September 1959
Uncl.

GELEJI, A.

Calculation of the rolling torque. In German. p.447.

ACTA TECHNICA. Budapest, Hungary. Vol. 24, no. 3/4, 1959.

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 9, September 1959
Uncl.

POL/39-26-3-4/13

18(5)
AUTHOR. Geleji, Aleksander, Professor, Doctor of Engineering

TITLE: Moments and Power During the Rolling Process

PERIODICAL: Hutnik, 1959, Vol 26, Nr 3, pp 105-110 (Poland)

ABSTRACT: Calculations for determination of moment and power during rolling process are made. The term of the correction coefficient η which means the ratio between the measured and the calculated rolling moment is dealt with. Figures 1 and 2 show an exact diagram of the rolling process as well as of the power achieved by it, and the necessary dimensions for determination. The rolling power "L" can be determined by equations according to formula (16). The excharge into values of km (medium plastic resistance) is done by formula (17). By formula (11), the rolling moment is determined. From these equations results "F" (formula 12). Then the coefficient η is introduced (formulae 19, 20, 21). Known values for the factor "u" mentioning the references are shown in figure 3 (hot rolling aluminum 99.5%), in figure 4 (rolling

Card 1/3

of five types of steel), and in figure 5 (various aluminum alloys and nickel-steel). Figure 6 shows the ratio that the medium value of η bears to the degree of deformation. From formulae 18, 18a, and 18b, different values for η can be taken for information. Further equations for the determination of the position of the partial (neutral) plane are given by the author. Figure 7 shows an exact scheme for better understanding of the determination. According to the author this determination is of special importance as the main problem in the rolling process is to reduce the plastic resistance . As can be seen from the calculation, the moment of the plastic resistance is before the neutral plane (equations 30 and 31), i.e. behind the neutral plane (equations 33 and 34). The summary moment is obtained by equation 35. the maximum value for the plastic resistance in the neutral plane by equations 38 and 39. According to the author the value of the factor η can be determined by equations 19 and 36 (see formulae 46 to 49).

Moments and Power During the Rolling Process POL/39-26-3-4/13

There are 5 graphs, 2 diagrams and 6 German references.

ASSOCIATION: Czlonek Zwyczajny Wegierskiej Akademii Nauk Budapest (Member of Academy of Sciences Budapest)

SUBMITTED: October 16, 1958

Card 3/3

OKLEJI, A., prof., dr., ing., Mitglied der Ungarischen Akademie der Wissenschaften

Calculating the force demand in the dies at press forging; Report No. 20 of the Working Community for Metallurgy of the Hungarian Academy of Sciences. Acta techn Hung 34 no.1/2:185-197 '61.

GELEJI, A., ord. Mitglied der Ungarischen Akademie der Wissenschaften
DEVENYI, G.; GULYAS, J.

Bar extrusion experiments. Acta techn Hung 44 no.3/4:437-445
'63.

1. Redakteur, "Acta Technica Academiae Scientiarum Hungaricae,"
(for Geleji).

L 31348-66 EWP(w) EM

ACC NR: AT6021141 SOURCE CODE: HU/2504/65/050/000/0069/0080

AUTHOR: Goloji, A.--Golei, A. 32 B+1

ORG: Working Group for Metallurgy, MTA

TITLE: Elastic-plastic bonding of circular rods

SOURCE: Academia sciontiarum hungaricae. Acta technica, v. 50, 1965, 69-80

TOPIC TAGS: bonding strength, metal bonding, elasticity, plasticity

ABSTRACT: The technical literature lacks a detailed analysis of the elastic-plastic bending of rods with circular cross section. Studies were conducted to establish whether an exact numerical evaluation of the problems involved is feasible. It was found that great difficulties exist; however, it was possible to develop an approximating technique which permits the problems to be solved at an accuracy of ± 1-5%. The equations involved in this technique were derived and presented. Orig. art. has: 6 figures and 52 formulas. [JPRS]

SUB CODE: 20, 13 / SUBM DATE: 07Oct63 / OTH REF: 004

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PHASE I BOOK EXPLOITATION SOV/4983

International symposium on macromolecular chemistry. Moscow, 1960.

Mezhdunarodnyy simpozium po makromolekulyarnoy khimii, SSSR, Moskva, 14-18 iyunya 1960 g; doklady i avtoreferaty. Sektsiya II. (International Symposium on Macromolecular Chemistry Held in Moscow, June 14-18; Papers and Summaries) Section II. [Moscow, Izd-vo AN SSSR, 1960] 559 p. 5,500 copies printed.

Sponsoring Agency: The International Union of Pure and Applied Chemistry, Commission on Macromolecular Chemistry

Tech. Ed.: T.A. Prusakova.

PURPOSE: This book is intended for chemists interested in polymerization reactions and the synthesis of high-molecular compounds.

COVERAGE: This is Section II of a multivolume work containing papers on macromolecular chemistry. The papers in this volume treat mainly the kinetics of various polymerization reactions initiated by different catalysts or induced by radiation. Among the research techniques discussed are electron paramagnetic resonance spectroscopy and light-scattering interpolation. There are summaries in English, French and Russian. No personalities are mentioned. References follow each article.

AVAILABLE: Library of Congress

Vinyl compounds

19

Geleji, F.

78. Mechanism of copolymerization of butadiene with styrene in the presence of redox systems. F. Geleji and O. Turmó. *Vegyipari Kut. Int. Közl.*, 1954, 4, 211–6; *Ref. Zhur. Khim.*, 1956, abs. 22826. In Hungarian. Using polarographic and conductometric methods, the authors investigated the reactions taking place during the "maturing" of a solution containing ions Fe^{3+} and $P_2O_7^{4-}$ which is used as an activator in redox systems containing sugar. At 60°C the maximum quantity of Fe^{3+} (3/4) gives rise to an iron-pyrophosphate complex. As required by theory, the rate of formation of the complex increases with temperature. Hydrolysis of the pyrophosphate ions was not observed.
3S2D21MD29.1211

3 2 May

GELEJI, Frigyes

Present situation of the manufacture of synthetic fibers and the trend of its development. Magy kem lap 15 no.4:149-156 Ag '60.

1. Szervesvegyipari es Muanyagipari Kutato Intezet.

GELEJI, Frigyes; LEVAI, Gyula; MIGRAY, Emod

Castor oil as a raw material of the chemical industry. Magy kem lap 15 no.7:298-303 Jl '60.

1. Szerves Vegyipari es Muanyagipari Kutato Intezet.

GELEJI, Frigyes

What is the cause for the characteristic rustling and sticking of nylon underclothes? How can it be stopped? Elet tud 15 no.39:1218 25 S '60.

1. Muanyagipari Kutatointezet munkatarsa.

GELEJI, Frigyes

The "well-combed" molecules. Elet tud 17 no.30:935-938 29 Jl '62.

GELEJI, Frigyes

What is the advantageous property of "Terylene" plastic?
Elet tud 15 no.14:418 3 Ap '60.

1. Muanyagipari Kutato Intezet osztalyvezetoje.

KOVACS, Laszlo; GELEJI, Frigyes

Polyamide sieve fabric-coated filter pipes. Hidrologiai kozlony 40 no.1:54-57 F '60.

GELEJI, Frigyes

Plastic foils. Elet tud 16 no.44:1395-1398 29 O '61.

ODOR, Gezane; GELEJI, Frigyes

Copolymerization of polypropylene fibers by the method of preliminary radiation with ^{60}Co. Magy kem lap 17 no.5:221-226 My '62.

1. Muanyagipari Kutato Intezet, Budapest.

HOLLY, Sandorne; GELEJI, Frigyes

Synthesis and investigation of modified polyesters. Magy kem lap 18 no.7:324-327 Jl '63.

1. Muanyagipari Kutato Intezet.

GELEJI, Frigyes

Multi-purpose plastic materials. Elet tud 18 no.37:1175-1178 15 S '63.

GELEJI, Frigyes; DUTKA, Gyorgy

Fiber formation from polypropylene. Magy textil 15 no.11: 506-507 '63.

1. Muanyagipari Kutato Intezet.

GELEJI, Frygyes; SZABO, Karoly; ODOR, Gezane

Possibilities for changing the properties of polypropylene fibers. Magy textil 17 no.2:64-66 F '65.

1. Research Institute of the Plastics Industry, Budapest.

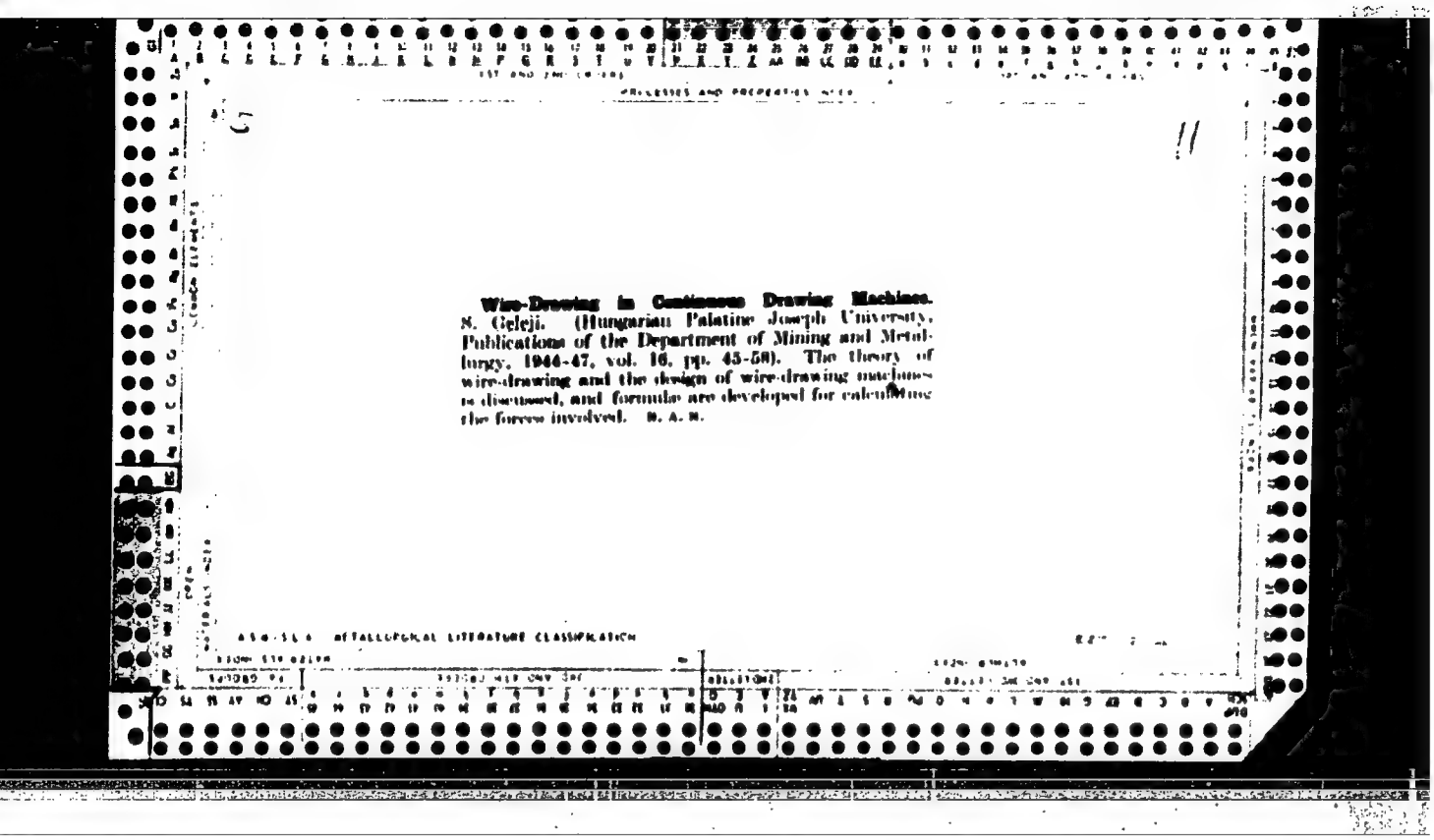
ODOR, Gezane; GELEJI, Frigyes

Improving the colorability of polypropylene fibers by exposing them to radiation. Magy textil 17 no.3:121-123 Mr '65.

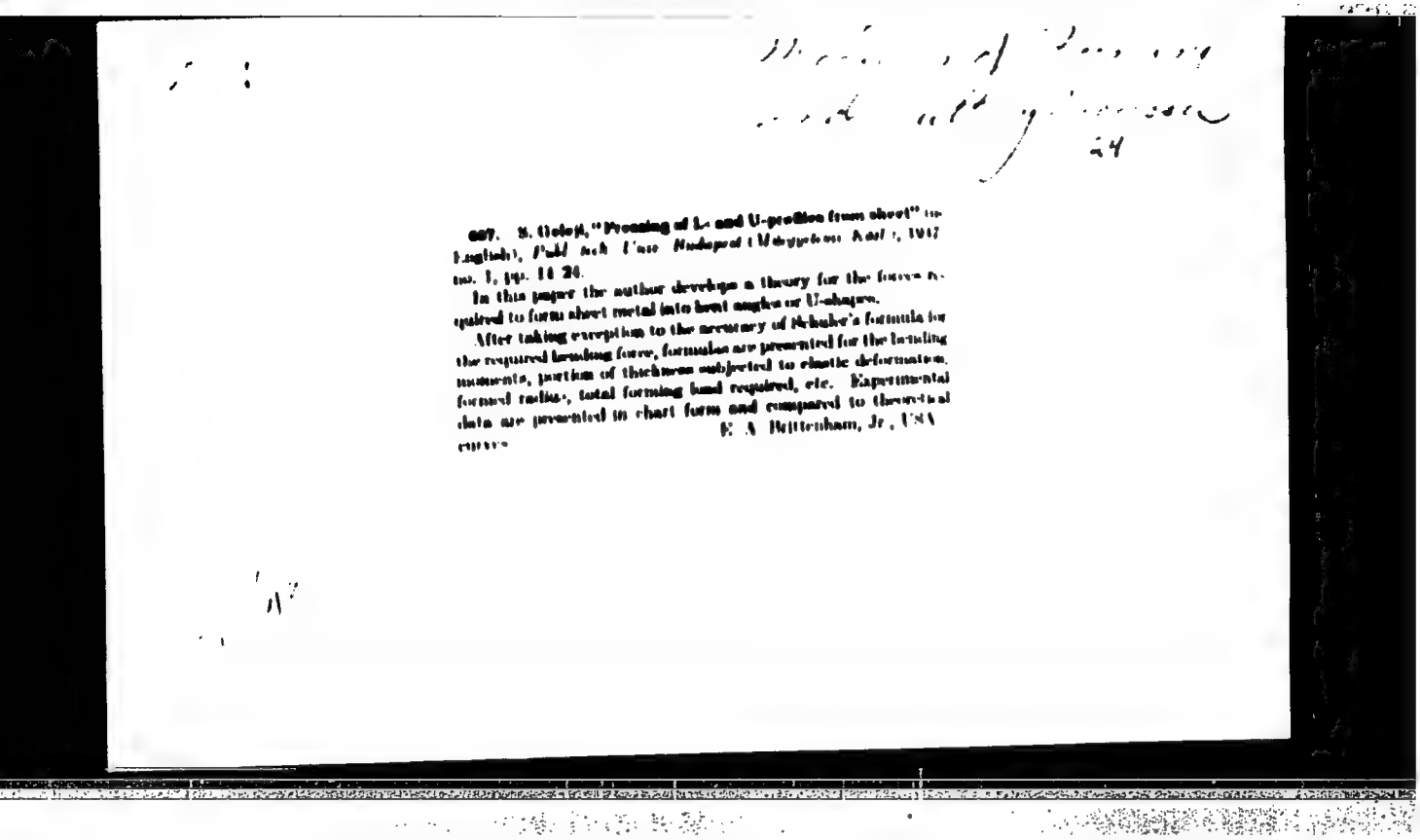
1. Research Institute of the Plastics Industry, Budapest.

Fuel consumption in metallurgical furnaces and the temperature of the flame area. Sándor Galaji.—*Bányász. Kohász. Lapok* 69, 378-[84](1936).—Mathematical formulas are given for calcn. of the probable fuel consumption and the temp. produced. S. S. de Finály

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Wire-Drawing in Continuous Drawing Machines. S. Geleji. (Hungarian Palatine Joseph University, Publications of the Department of Mining and Metallurgy, 1944-47, vol. 16, pp. 45-58). The theory of wire-drawing and the design of wire-drawing machines is discussed, and formulæ are developed for calculating the forces involved. M. A. M.

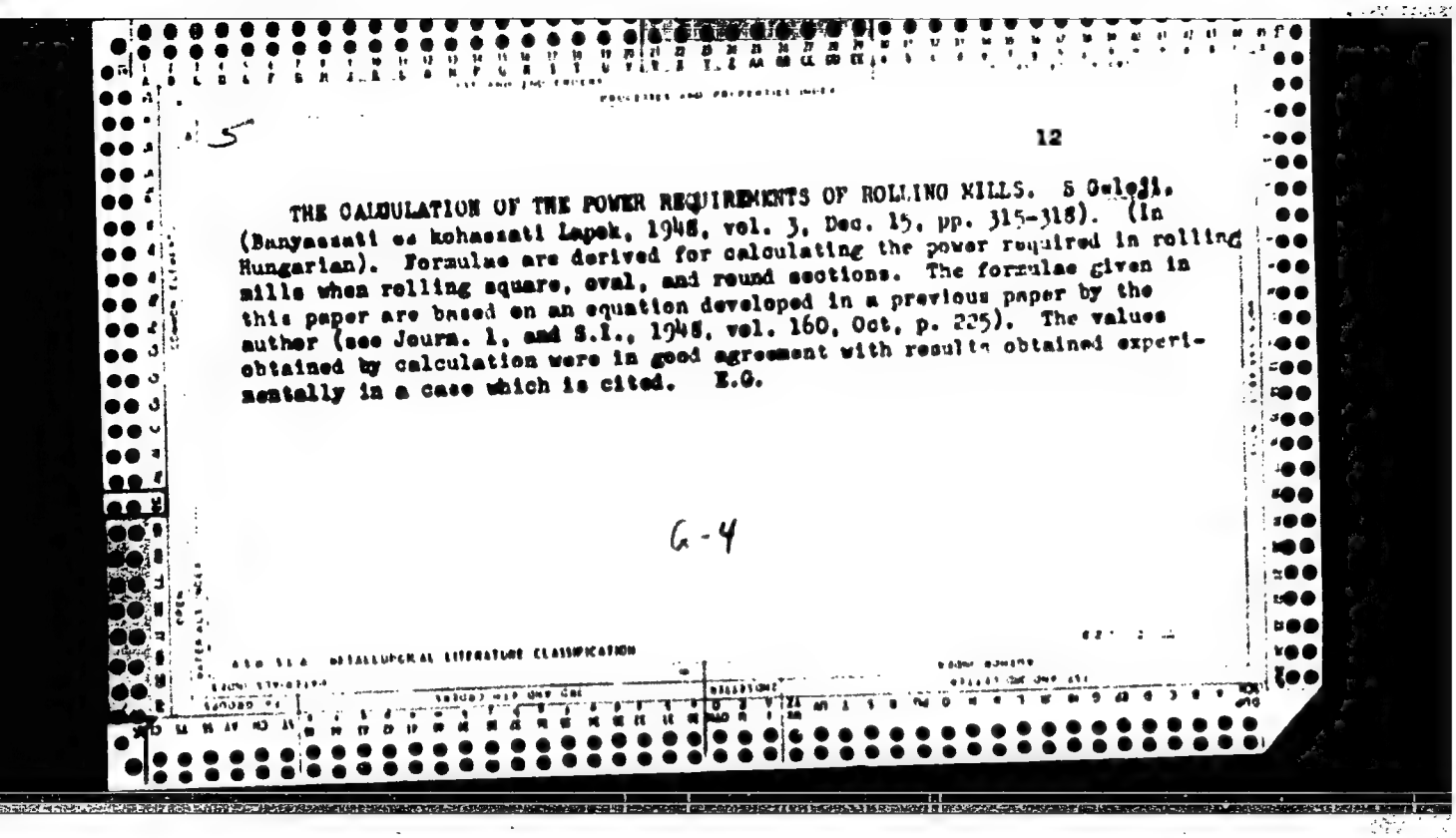


607. S. Oehel, "Pressing of L- and U-profiles from sheet" (in English), *Publ. Tech. Univ. Budapest (Magyarok Közl.)*, 1947 no. 1, pp. 16-26.

In this paper the author develops a theory for the forces required to form sheet metal into bent angles or U-shapes.

After taking exception to the accuracy of Schuler's formula for the required bending force, formulas are presented for the bending moments, portion of thickness subjected to elastic deformation, formed radius, total forming load required, etc. Experimental data are presented in chart form and compared to theoretical curves.

E. A. Butterbaugh, Jr., USA



THE CALCULATION OF THE POWER REQUIREMENTS OF ROLLING MILLS. S Geleji. (Banyaszati es kohaszati Lapok, 1948, vol. 3, Dec. 15, pp. 315-318). (In Hungarian). Formulae are derived for calculating the power required in rolling mills when rolling square, oval, and round sections. The formulae given in this paper are based on an equation developed in a previous paper by the author (see Journ. I. and S.I., 1948, vol. 160, Oct., p. 225). The values obtained by calculation were in good agreement with results obtained experimentally in a case which is cited. E.G.

G-4

GELEJI, SANDOR.

Aluminum handbook; course materials. illus., maps, bibl., tables (part fold.)
(Mernoki Tovabbkepzo Intezet, 1949. 687 p. Budapest)

SO: Monthly List of East European Accession (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

BA

4

Calculation of power requirements of rolling mills. [illegible] (*Kohasz. Lapok*, 1960, [illegible], 211–[illegible]; *J. Iron Steel Inst.*, 1960, [illegible], 110).—Formulae for calculating the power required when rolling square, oval, and round sections are derived. Calc. and experimental values are in good agreement. R. H. CLARKE.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000514620005-8"

GELEJI, Sandor

Kohogeptan [Foundry machinery] Budapest, Tankonyvkiado, 1950. 478 p. diagrs., tables. Bibliography: p. [471]-473.

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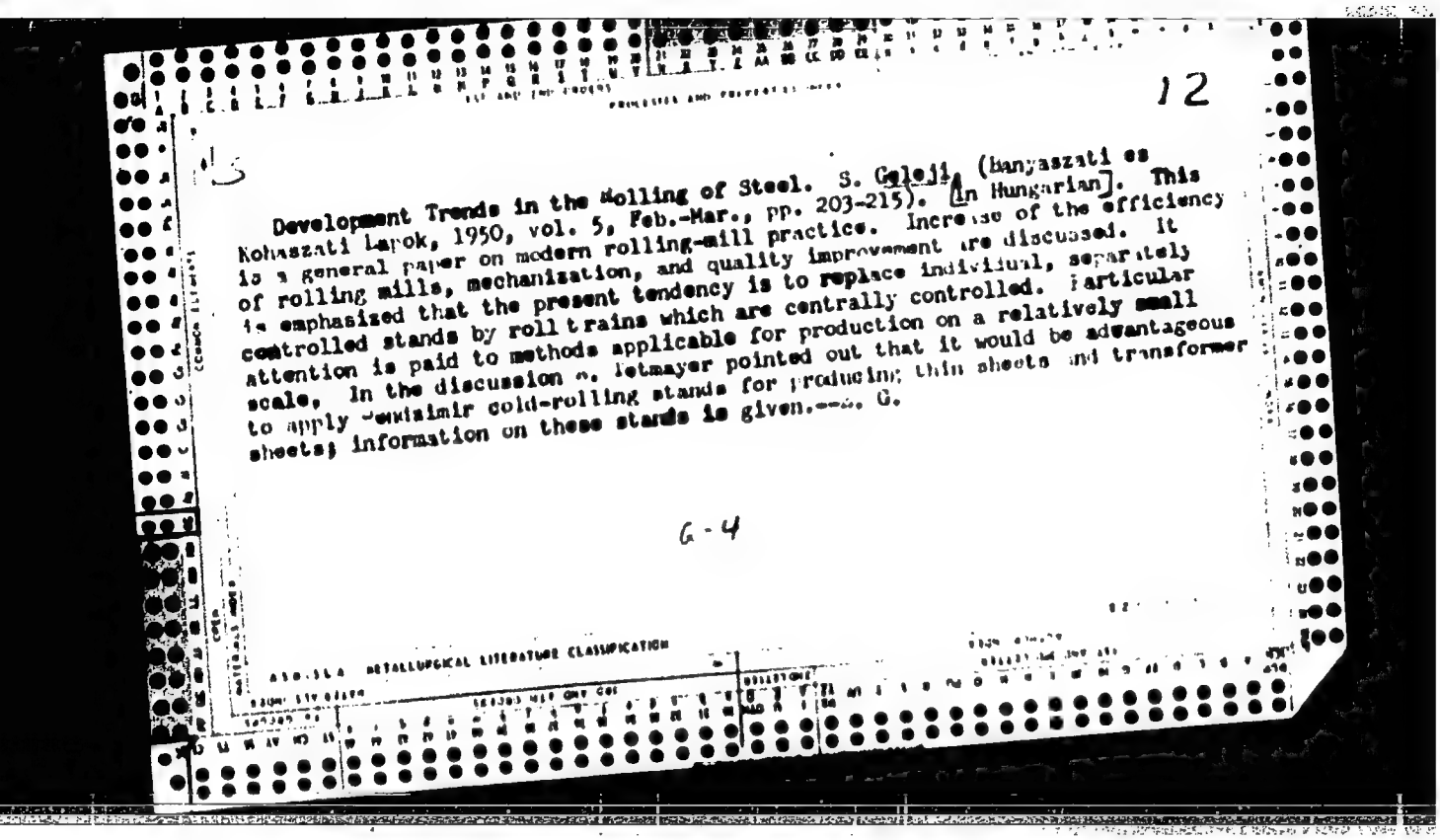
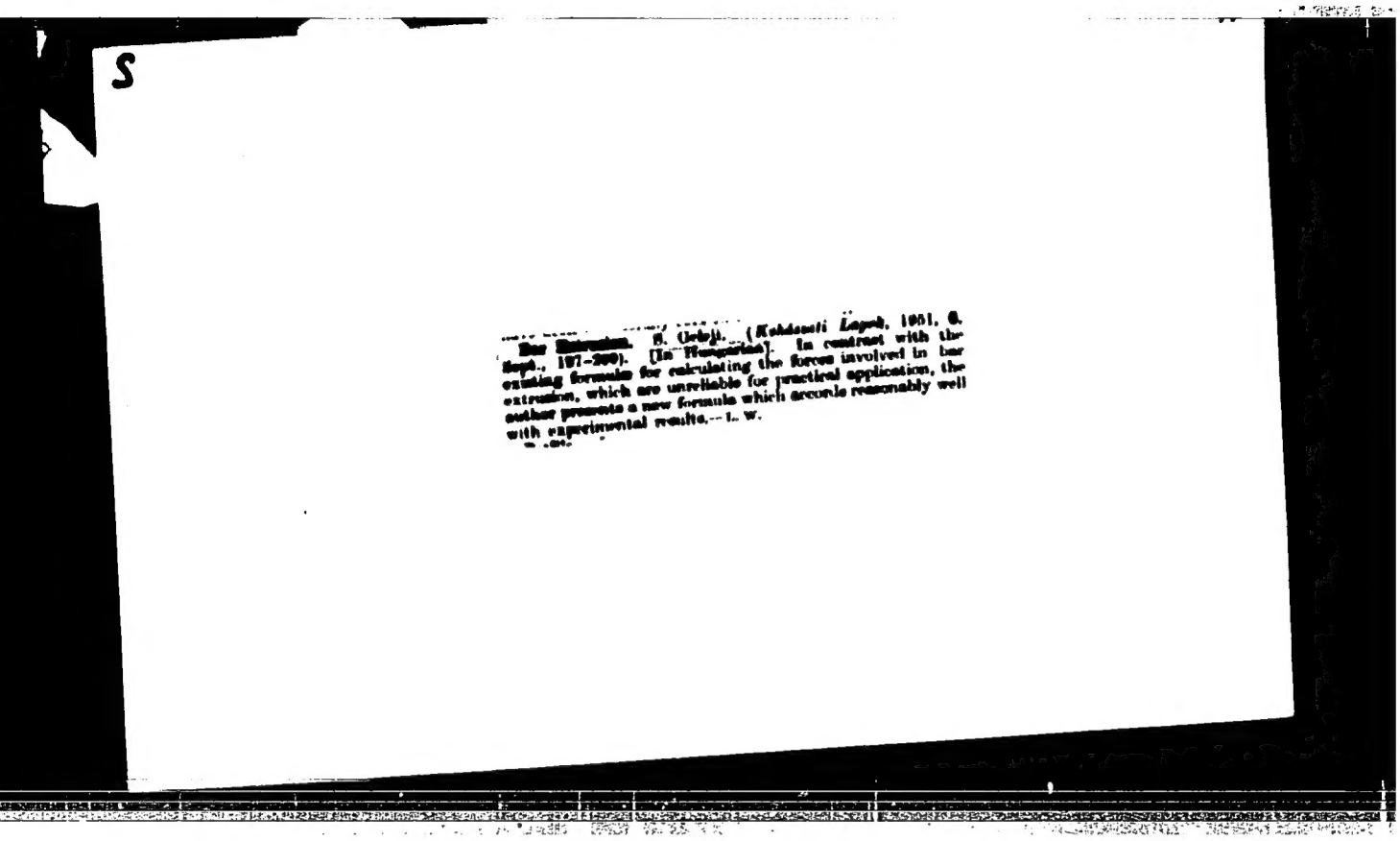


12

Development Trends in the Rolling of Steel. S. Caleli. (Banyaszati es Kohaszati Lapok, 1950, vol. 5, Feb.-Mar., pp. 203-215). [In Hungarian]. This is a general paper on modern rolling-mill practice. Increase of the efficiency of rolling mills, mechanization, and quality improvement are discussed. It is emphasized that the present tendency is to replace individual, separately controlled stands by roll trains which are centrally controlled. Particular attention is paid to methods applicable for production on a relatively small scale. In the discussion o. Ietmayer pointed out that it would be advantageous to apply Sendzimir cold-rolling stands for producing thin sheets and transformer sheets; information on these stands is given.—G.

G-4



S

Bar Extrusion. S. (Jeb)[illegible]. (*Kohászati Lapok*, 1951, 6. Sept., 197–200). [In Hungarian]. In contrast with the existing formulæ for calculating the forces involved in bar extrusion, which are unreliable for practical application, the author presents a new formula which accords reasonably well with experimental results.—I. W.

539.4.016

68. **The effect of the ... of rolls on the cold rolling of metal sheets and strips** (In German) S. Gelej
(*Acta Technica Academiae Scientiarum Hungaricae* ... Vol 7, 1953, No. 1—2, pp. 217—223, 4 figs)

It has been proven in the practice of sheet rolling that the smaller the diameter of the work rolls the less resistance is encountered in rolling. This is explained by the fact that smaller diameter rolls undergo less flattening than large diameter rolls. The degree of flattening depends on the rolling pressure, i. e. on the resistance to forming in the gap between the rolls. On the other hand, the longer the arc of contact the greater the resistance to forming, however, with identical reductions in the thickness the smaller the diameter of the rolls the shorter the arcs of contact. With flattening rolls both the length of the arc of contact and the resistance to forming increase. The degree of flattening and thus the arc of contact may be calculated by the formula of the resistance to forming and by the *Hertz* formula for the flattening of rolls pressed against each other. With the help of the thus determined arc of contact the resistance to forming and the pressure of rolling can be computed with adequate precision for the rolling of thin sheets.

S. G.

HUNG.

[illegible] Vol. 9, 1958 [illegible] 7 figs.)

based on previously [illegible] the author elaborated a method of computing the power demand of rolling in grooved rolls. The point of departure is the theorem that the power demand of rolling sections consists of two components: the power needed for forming proper, and the power consumed by friction arising in the grooves. The power demand of forming depends on the reduction per pass, the [illegible] force to forming, and [illegible] depends on the relative sliding velocity of the roll surfaces on the pass, on the coefficient of friction, and the pressure of rolling, respectively, on the mean resistance to forming. The mean resistance to forming is calculable with the aid of the mean reduction of thickness in the pass; the mean relative sliding velocity is computable from the difference between the mean velocity of the working circumference of the groove and the speed of rolling. The mean coefficient of friction arising in the groove is less than the coefficient of friction in blooming or plate rolling because at no point of contact does the groove stick to the surface of the piece [illegible] the coefficient of kinetic friction, which is always lower than the coefficient of static friction, must be taken into account.

GELEJI, S.

GELEJI, S. Determination of needs for power and performance in making pipe by the Fhrhardt method. p. 205.

Vol. 12, no. 1/4, 1954, Budapest, Hungary KOZLEKEDESI

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 3, March, 1956